

Case Study

Bald Eagles of Captiva Island



Window To Wildlife (WTW) is an American company specializing in wildlife camera installations. They began with bald eagle projects, but have widened their scope to observing many rare, wild birds and animals. They live stream their remote installations on YouTube and Twitch, garnering thousands of live viewers daily.

"My whole philosophy is to use technology to help wildlife conservation and promote humans coexisting a lot better with wildlife. I feel I can have more of an impact on wildlife conservation and education through these live cameras."

- Connor O'Brien from WTW

The Challenge

On Captiva Island, there are nests that have been built by bald eagles, they have been there for over 15 years. In the past, the landowner would monitor these birds on her own, but she acquired a health condition that prevented her from going up to watch the eagles.

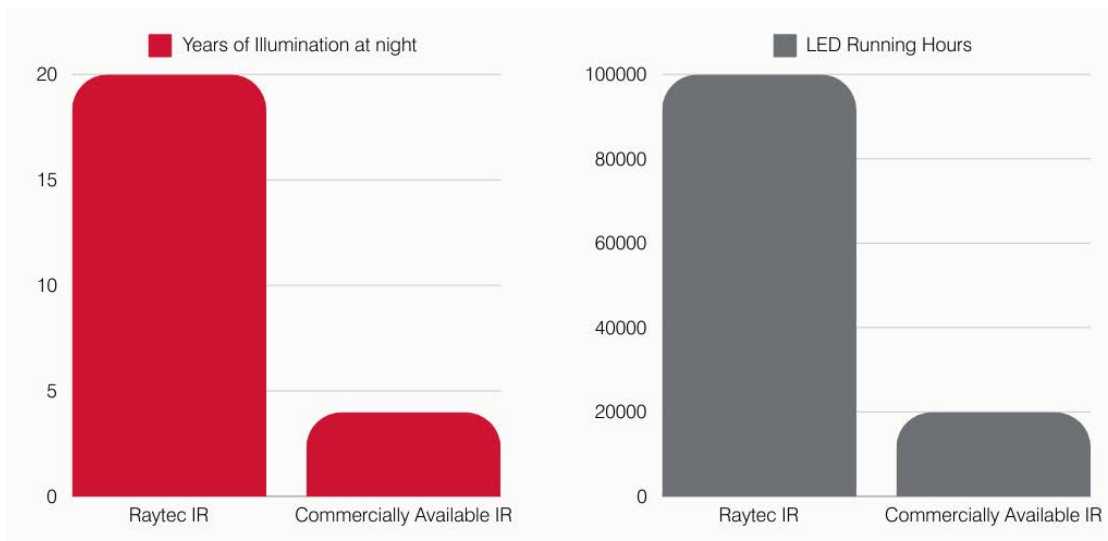
The landowner reached out to WTW and they took on the project. Camera systems were installed for viewing and conservation purposes on private land. A creative solution was required to monitor the bald eagles on Captiva Island - one that would allow for remote viewing of the birds' activity at night, but that would not create a disturbance or a disruption to their usual behavior.

The Captiva nest installation is on a remote island off Florida's west coast; consumption was a concern so WTW sought out a solution with the lowest power draw possible. As the nests are outdoors, and very elevated, they are at the mercy of the elements and are often battered by high Atlantic winds. This installation needed to be power-efficient, robust, low maintenance, and long-lasting.

Comparisons: Raytec vs. Commercial Retailer Infrared (IR)

Comparing the small Raytec infrared lamps to other commercially available units at large chains or online retailers, Connor says “The IRs from Raytec have only a faint red glow - you can barely see it. It’s imperative to not disturb the animals and to limit camera noise. This allows for a better install quality, that’s less invasive to the animals. The ones you find at the large chain retailers tend to have very concentrated hot spots”

Using Raytec is also more sustainable - Raytec’s luminaires are rated for 100,000 running hours (which equates to approximately 20 years of illumination if only used at night) compared to most commercially available IR which are only rated for 15-20,000 running hours. WTW states that their maintenance for the sites is roughly every 2-3 years, and the total longevity of the installation is about 5-8 years. To meet these standards, it is crucial to use products that are sustainable & robust to avoid constant maintenance and/or replacement.



The Solution

WTW purchased and installed the VAR2-i2-1 illuminator on Captiva island in 2018 and since then, it has weathered a multitude of lightning strikes and a few hurricanes.

In 2022, Hurricane Ian rolled through the southeastern United States and destroyed the entire bridge from Florida to Captiva Island, but the Raytec IR remained.





Why Raytec?

- Raytec's VAR2-i2-1 is small but mighty; the lamp is built to withstand incredible weather events.
- The glow from the infrared is faint enough and is proven to not disturb the birds.
- The various angled diffusers enable the light to be dispersed evenly across the field of vision and avoid any hot spots, giving a clear and crisp view.
- Raytec's POE lamps make installation simple and easy - using just one cable for power and data.
- The low-voltage illuminators allow the installation to be low consumption with a minimal power draw.
- All of Raytec's illuminators boast over 100,000 running hours, or 20 years of illumination if only powered at night.

Altogether, these features create the ideal solution for a remote surveillance setup, as well as being incredibly sustainable.

After the destruction of Hurricane Ian, the nest was rebuilt in a different location on the same tree. The VAR2-i2-1 lamp's angle was changed, but the location remained the same as the illuminator was totally unaffected. Currently, the original Raytec illuminator from 2018 still provides infrared light for the eagle camera that can be viewed on WTW's YouTube and Twitch channels, streaming live 24/7 to continue to educate and advocate for the conservation of American bald eagles!

Window to Wildlife's
streaming links:

Youtube Live >

Twitch Live >